

Paper Title: The Semiotic Foundation

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Abstract:

The word semiotics signifies the study of all forms of human communicative behavior, particularly of signs and symbols. Used as an adjective here semiotic refers to what is often a major problem in all efforts to reconcile the continuous confrontation between the sciences and religion. This paper advances the thesis that significant semantic and connotative differences in the language used by both scientists and theologians impede any effort at effective communication. Scientists claim to seek truth by observation. Theologians claim to know truth by inspiration. Rigid scientists seek to reconcile religion to scientific knowledge. Fundamentalist religious philosophers try to reconcile science to religious beliefs.

Philosophers in both science and religion concede the limits of human understanding, but by dividing total reality into two categories of natural and supernatural they construct a semantic barrier between them. In the three major monotheistic world religions, Judaism, Islam, and Christianity, the concept of a single supernatural omnipotent, omniscient, personalized entity symbolized in English as God who rules the physical cosmos does not fit the criteria of science. On the other hand, efforts by scientists to explain the not yet fully unknown nature of the physical universe solely in terms of presently known physical laws, and their unwillingness to investigate or to admit the possible existence of psychic and spiritual influences on physical realities exacerbates the semiotic confrontation between religious and scientific thinking.

In the major oriental religions of Hinduism and Buddhism the expression of the continuity of life in the concept of reincarnation has been generally misinterpreted as metempsychosis. The idea of the transmigration of human souls into other forms of life as reward or punishment according to the “karma” carried over from the previous life violates both monotheistic belief and the Aristotelian logic of science. Yet, any global discussion must consider this perspective. To better express the concept of multiple lifetimes the term palingenesis, from Greek instead of Latin, is introduced as preferable to the widely misunderstood and abused term reincarnation. and the concept of repeated lifetimes is re-examined and re-interpreted. Disagreement on the nature and beginning of human life is briefly discussed.

After arguing the need to consider the semiotic foundation for all discussions of science and religion from a global perspective, and arguing they are two symbiotic aspects of a single reality, suggestions are given which may enhance communication among these confrontational areas.

Biography:

Don George, Ph.D., Emeritus Professor at the University of Southern Mississippi, received his Doctoral degree from Louisiana State University in 1955 with a major in Speech Communication with an emphasis on oral language production and perception and a minor in English language and general linguistics. He joined the faculty of The University of Southern Mississippi in 1956. From 1959 to 1961 he was on loan to the State University of New York to participate in the Ford Foundation's English Language Project in Indonesia. From 1966 to 1968 he was Chair of the English Department at the Lebanese National University in Beirut, Lebanon on a Fulbright grant. After retiring in 1978 he was invited to teach in a program for Chinese English teachers in the People's Republic of China from 1980 to 1982

Dr. George has presented platform papers on various aspects of language to the International Congress of Phonetic Sciences in Prague, Leeds, Montreal, and Copenhagen, and to the World Congress of Phoneticians in Vienna. In 1998 he presented a paper "Semiotics, Science and Theology" at the Australasian Conference on Process Thought in Melbourne, Australia, to which some of this paper is related.

Paper Text:

When Polonius asked Hamlet, "What do you read, my Lord?" Hamlet replied, "Words, words, words."

Many years ago I read this squib, "When the gods, in playful mood, contemplated what gift they might give to humans that would generate the greatest confusion, they decided to give the gift of language."

In the Biblical Genesis story, when humans tried to build a tower to reach heaven the gods were jealous of their potential power and said, "Come, let us go down and confuse their language so they will not understand each other."

Speaking of the appearance of his father's ghost Hamlet said, "There are more things in heaven and earth, Horatio, than are dreamt of in your philosophies."

In any science/religion discussion, scientists who later study theology and theologians who later study any of the sciences find their thinking colored by a feedback loop from their first discipline. With limited understanding we create reality with language. It is common to attribute the cause of misunderstanding and disagreement in any situation to semantic confusion. Semiotics, the study of all forms of human communication, especially signs and symbols as expressed in language, underlies the agenda of most human discussion. Semantic and connotative differences often make one hundred percent agreement in many discussions virtually impossible. Because of the complex diversity of language in both scientific and religious philosophies, the semiotic foundation, which for centuries has been a stumbling block to religion and science discussions, should be considered before there can be a fruitful discussion of their different ways of thinking.

In the midst of the great philosophical and theological upheavals rocking the global social order during the late 19th and early 20th centuries, four largely unnoticed thinkers deserve our attention. Actually, there are only three theses, since two men reached the same conclusion from analogous independent research. I will discuss these

men separately and their contribution to our understanding before considering the implications of their thinking on the discussions of this conference.

The first of these is Charles S. Peirce, logician, mathematician, and philosopher, writing in the late 19th century. Among his voluminous writings is a little noted discussion of the relationship of symbols and reality. He uses the term “firstness,” by which he says, essentially, that all reality exists only in potential until it is given a name. He does not limit the concept to verbal linguistic utterances, or words, but includes any of a variety of symbols applied to the phenomenon. The assigned symbol is defined by other symbols and the phenomenon becomes a “secondness” which can be manipulated as a reality. It can be discussed, debated, defined, and treated as if it had existence. In this way Peirce differentiates pragmatic reality and potential reality.

The next thinkers to consider is the pair of linguistic anthropologists Edward Sapir and Benjamin Lee Whorf. They independently reached the conclusion that the language we use influences, or directs, the way we think. In other words, we think with language, not necessarily grammatical utterances but language expressed in symbols. In cultures where a given phenomenon does not exist the language will have no symbol to express it. When an unknown phenomenon is introduced into a culture the culture will create a symbol or borrow a term from another language and adapt it to the syntax of their own language. An example is the nomenclature of sub-atomic particles in physics. In cultures where distinguishing among a variety of similar phenomena is important, the language will have a variety of symbols to express the perceived differences.

The third thinker we should consider is Alfred Korysbski who warned against the common fallacy of mistaking the symbol for the reality it represents (“The word is not the thing”), of accepting the fallacy that things are static in time (“John Doe at time 1 is not the same as John Doe at time 2.”), and the fallacy of thinking of similar appearing phenomena as the same (“cow 1 is not the same as cow 2”). He calls this a system of non-Aristotelian logic and argues that western thought has been shackled with Aristotelian logic for too long. Aristotelian logic undergirds both scientific and theological reasoning to create the world in which we live today.

While many psychologists today do not completely agree with Sigmund Freud’s psychology, the concept of the subconscious, I believe, adequately describes the sub-cortical recesses of the brain in which we store all the complexity of experiences we do not want or need to retain at the conscious level. These subconscious memories color our deepest core beliefs and unconsciously affect our interpretation of reality. A line in the book of Proverbs in the Bible expresses this same thought, “For as he thinketh in his heart, so is he.” (Proverbs 23:7, AV).

This, or any other, conference on the global perspectives of science and religion will flounder without a firm semiotic foundation. The problem is cleverly and facetiously expressed on a little note sometimes seen on the desks of executives, “My mind is made up; don’t confuse me with facts.” Devoted scientists will say, “Science is devoted to searching for truth.” Dogmatic theologians will say, “We know the truth and are devoted to persuading others to accept it.” This creates a crumbling semiotic foundation.

In laying the semiotic foundation for consideration of a global perspective on science and religion, we need to go back to the foundation of language. Anthropologists do not agree on when or how language began or when the sounds produced in the larynx can be classified as true language. Except for the simplistic irrational dogma of literal

Bible creationists, (“God did it all at once in six days six thousand years ago.”) it can be generally agreed that oral language developed at some time as a natural outgrowth of human evolution. It would be presumptuous in this paper to propose a definitive answer to this mystery. However, it is reasonable to accept that intentionally produced sounds as symbols (in contrast to sounds produced as signals in the course of a collective activity such as in the hunt, or as signs of the physical, emotional, or mental state of the individual) coincided with the evolution of the ability to conceptualize abstractions. Evolution is stimulated in response to felt needs. The felt need to represent things and events in the absence of the actual item or event is indicated with the advent of drawings on cave walls in several places and with various apparently symbolic petroglyphs in others. It is reasonable, therefore, to conjecture that the need for graphic expression and the need for vocal expression of such abstractions developed along together. The pictorial drawings are dated by archeologists and anthropologists at around twenty to thirty thousand years ago

With the advent of abstract thought, *Homo sapiens* made another evolutionary leap and transmuted into *homo cogitans*, or thinking man. He began to observe his natural environment and became curious about what it was and how it came to be. (I am using the singular pronoun “he” as a collective pronoun for the human race.) The question of “what is it?” was easily answered by assigning symbols to things. In the Genesis story, one of the first acts of Adam was to name things. As Peirce pointed out, when a thing, an event, an action, a relationship, a characteristic, or any phenomenon is assigned a symbol it becomes a reality. Language as a system of communication can be said to have begun with the collection and organization of symbols. Any proposed description of the details and probable form of this proto-language is speculation.

The common proverb, “Necessity is the mother of invention” signifies the dynamic of evolution. In his novel *The Boat of a Million Years*, Poul Anderson develops the thesis that no change in the collective psyche of civilization takes place until there is a felt need to change. With the felt need to identify and symbolically differentiate among perceived phenomena came the corollary question of “How?” The question of causality arose. Among higher vertebrates curiosity about the identification of things by sensory perception is necessary for survival. While there probably are associations stored in memory, so far as we know other animals are not concerned about how things came to be, only about the fact that they are. Nevertheless, I, like many other pet owners, often sentimentally think my cats look upon me as the “god from whom all blessings flow.”

For the human species and all other animal species, the reality of the natural world is limited to what can be experienced through its sensory receptors. With the advent of abstract thought humans became aware of another world that could not be perceived with the senses but which was felt to exist. He identified it symbolically as the spirit world, and it was in that world that all the answers to questions of “how” were placed. There was a spirit in everything which made it to be what it was. Anything which could not be understood was attributed to the appropriate spirit. When everything was good, it was assumed all the spirits were in harmony and pleased, and their relationship with humans was in balance. When there was trouble it was assumed the spirits were angry or displeased and needed to be appeased to restore the balance.

When spirits were named, they became realities and were deified as personalities and identified as supernatural gods. It became incumbent upon humans, then, to

maintain a harmonious relationship with the god, to avoid offending him or her (gods were not always thought of as masculine) and to do things to honor and please him/her.

Humans, like everything else, also had a spirit which had to be kept in a harmonious relationship with the spirit god in order to gain favor and avoid punishment. Certain individuals claiming to be able to communicate with the spirit world assumed authority to define and direct the individual and tribal relationship with the god. Whether called shaman, priest, or minister, their relation to society remains essentially the same.

From early beginning as thinking creatures superior to other life forms, the human species has been religious. The root of the word religion signifies to bind, or tie, and in every culture, so far as I know, mankind has bound itself to a relationship with a god regardless of how the god is symbolized. Ever since humans first personified their gods with names until the present day, the history of the race has been a perpetual struggle to maintain a good relationship with their god as defined by their religious leaders. By giving a name to the unseen incomprehensible spirit it became a person, and as a person he/she could then be assigned supernatural attributes and powers.

All this does not imply there is no spiritual dimension distinctly different from the physical dimension known through our senses. The semiotic problem is that accepting an entity within that dimension as a person and assigning him/her a name engenders a willingness to be bound together in allegiance to that deity in order to gain favor or to escape punishment. Defining this god/person as almighty, all knowing, and ever present generates both fear and hope in one's subconscious mind and binds one's allegiance to the god. Fear and hope are, and always have been, the foundations of religion.

Religion took on political significance as leaders used it to solidify and maintain their political authority and justify their decisions and actions. Through the misuse of religion kings became gods or ruled in the name of the god. Wars were fought and people enslaved in the names of particular gods to satisfy the personal whims or the political ambitions of their rulers., Allegiance and obedience to the ruler was promoted as allegiance and service to their god.

In ancient times, science as knowledge of the physical world continued to exist as an adjunct to religion. The word science derives from a root that simply means "to know." and historically signified knowledge. In ancient times knowledge was guarded by initiates and acquired by learning from someone who knew. That one had acquired knowledge from someone before him/her who knew, and so *ad infinitum*. Knowledge of both the seen and the unseen world melded and was preserved and perpetuated orally for millennia. It can be reasonably said that science and religion have co-existed since human beginnings. They began to break apart with the observations of Copernicus, then Galileo, and culminated with the philosophers of the 18th century Enlightenment. For many ordinary people today, however, science has also become personified, and in their thinking has taken on the characteristics of a deity. To the average person, "Scientists say..." is thought of as "It is true." Even conferences called in an attempt to reconcile science and religion often give the appearance of a battle between two gods named Science and Religion.

When religion and science co-existed as correct (orthodox) knowledge of the truth, this unified knowledge was perpetuated by the priestly establishment with language and symbolic rituals and ceremonies. When they separated, total reality was divided into two realms, the natural and the supernatural. Science took the former and religion took

the latter. Both developed symbol systems, or language, to express what they believed expressed the truth. Science is not truth, as many think, but is only an approach to knowledge by reasoned observation. Using the “scientific method”, scientists have discovered many useful and worthwhile products and procedures. Yet, all the commonplace marvels we take for granted today produced by our scientific technology have existed in potential since the world began. Science is engaged in discovering truth, not proclaiming truth. With the instrumentation available today even more discoveries are possible. No true scientist, however, will claim to have perfect knowledge about anything appearing to be true, but will admit that what is thought to be true today may with new knowledge turn out to be in error tomorrow. Science is dynamic, ever reaching, ever seeking. It is from this perspective that John Templeton discusses the need for humility when we consider our present knowledge compared to the still vast unknown.

Over sixty years ago I encountered an analogy which I have passed on at the end of the course in every graduate class I have taught. Consider knowledge to be like an expandable sphere, or balloon. Inside is the total of all the knowledge you have obtained at any time, but outside lies a vast unknown with which the surface of the sphere is always in contact. The more your knowledge expands, the larger the sphere becomes, and when it does it makes even greater contact with the unknown. When we apply this analogy to the present sum of human knowledge we realize we are still like infants playing with their toys.

I have presented a brief commentary on the background of the dichotomy we identify generically as religion and science. Without identifying any particular religion or any specific branch of science I have shown the ancient semiotic base of language through which both are sustained. Yet, it is from this base that disagreements have developed. In the next section we will consider some of the ways by which language has created a semiotic stumbling block which continues to separate them

Theologians and scholars, the shamans of Judeo-Christian-Islamic religions, have applied the symbol “God” in its various linguistic forms to a supernatural masculine person who is the source of all that is, all that has been, and all that will be. The word theology derives from a Greek word meaning the study of *theo*, which is a generic word signifying any divinity among the Greco-Roman personalized gods and goddesses. After the self-proclaimed Apostle Paul declared in Athens that Jesus, the prophet from Nazareth, was the incarnation of the unknown god who had created everything that existed and was, therefore, superior to all the man made gods they worshipped, *theo* became identified in western thought as the one un-nameable creator personified in the Hebrew tradition as JHWH, or Jahweh.

Gods incarnating in human form was not a new concept with Paul. Trade routes through the eastern Mediterranean region had existed long before Abraham and the Jews. Knowledge of the religious traditions of India was already established, so Paul’s doctrine of Jesus being the incarnate son of God was not strange. While the Hindu tradition provided for a variety of minor deities with different names, the core of their religious thought focused around a trinity of superior gods, Brahma, Vishnu, and Siva.

While we were living in Indonesia on the eastern end of the island of Java, we often visited the neighboring island of Bali. As you know, the dominant religion in most of Indonesia is Islam. Although there are remnants of Hinduism on Java in the Wayung plays, a variety of Hinduism is the prevailing religion on Bali. When visiting Bali we

usually stayed in the Puri (compound) of the Jakorda Agung. (In the old days the title signified “King.”) in the village of Ubud. One day as the Jakorda and I were in conversation on the front porch of his house the subject moved into the area of religion.

“In our travels around the island I have noticed at the various shrines three slightly elevated chairs. Tell me about them.”

“Oh, they are for the gods to sit in.” he answered, and I detected a slight twinkle in his eye. Although he was still both the religious and political chief and maintained all the Hindu religious traditions and customs, the Jakorda was a well educated and very westernized man.

“Are you saying there are three gods, and they come and sit in those chairs?” I asked, “.I thought there were many gods.”

“We don’t see them but we think they do come when we are honoring them.” He replied, “Yes, there are names for many gods, but there is really only one God, “

“I see the influence of Islam,” I smiled.

“Not really. There is only one God, but he manifests himself in different persons and we give him different names according to what he is doing.” He explained. “When he is creating he is Brahma, when he is taking care of what was created he is Vishnu, the preserver, and when he is destroying what was created he is Siva, the destroyer.”

“So, with three names you have symbolically made three gods,” I smiled.

“Not three gods, three persons. Everything has three parts, or three dimensions, a beginning, an end, and something between. If it were not for Brahma creating, nothing would ever be. If it were not for Vishnu preserving, nothing could remain. If it were not for Siva destroying, the world could not hold it all and there would be no need for Brahma to create. None of them would have value without the others. That is why there must be three persons but only one God. Does it matter if we call them by three names?”

It sounded a bit confusing at first until I realized it was only a semiotic problem. The Hindu triune God was analogous to the Christian triune God. Both religions were using different names to express with symbols the nature of the realities believed to exist in their perceived world As Korzybski reminded us, we were dealing with words, not things, and were accepting the symbol for the reality. In our human cognitive system words become realities as we define them and gave them meaning.

We speak of eternity and infinity and measure them with the limits of our minds, and think we understand. We speak of God and think because we have defined him/her and described his/her characteristics we know God. We speak of morals and define them in terms of what we approve or disapprove, or what we have been taught in our culture to be good or bad. We speak of heaven and think in terms of our fondest hopes and aspirations. The prospect of heaven becomes the expected reward for pleasing our God. We speak of hell as the consequence of offending God and in our imagination we visualize our greatest fears. We have built a semantic box in which we have enclosed our world and imprisoned our thoughts.

Some thirty-five or so years ago I happened by chance upon a little short story with the title “The Innovator.” In the story a large culture had lived in an immense sealed self contained climate controlled opaque dome for so many generations no one could remember life ever having been different. Inside they knew they were safe, for everyone had always known from being taught by their elders the air outside was poisonous and would quickly kill anyone who ventured out.

A skeptic wondered about the outside world and scraped a small hole in the opaque paint to view it. Outside he saw a beautiful world with animals roaming about freely and safely and concluded the air could not be poisonous as they had always been taught. When he announced his conclusion the others declared he had gone mad, but he insisted he would prove it was safe outside by going out. When the others could not dissuade him they agreed to let him go. Some morbidly scraped peep holes in the opaque paint so they could watch him die. After he opened the ancient sealed portal and went out, they saw him dancing and frolicking and having fun. He motioned the others to come on out, the air was fine. Some who had seen him joined him, but others too timid to look would not believe their report or follow for fear it could be an illusion. Danger was still known to lurk outside and safety was still known to lie within..

This story is a parable of the situation in both the scientific community and the theological community. Each believes the atmosphere of the other may be poisonous and only few are innovative enough to venture into the realm of the other. Many scientists fear admitting the concept of God will require accepting literally the personal God of the Bible preached by evangelical Christians and taught in seminaries. To accept such a God would require accepting as true a variety of phenomena called miracles. These violate what are believed to be established scientific facts. Even when they recognize that most religious scholars admit the Genesis stories of creation to be Middle Eastern myths, there are too many other alleged miraculous events that tax scientific credibility. Alleged physical and biological events which violate accepted scientifically established principles can not be justified simply by designating them miracles brought about by an all powerful God. Accounts of miracles are thought by some scholars to have been included in the Bible tradition to justify the priestly/shaman claim for the omnipotence of God. On the other hand, theologians can not consider any agreement with the scientific community that does not include the personalized God they define. All treatises on systematic theology begin with an assumption of a supernatural God and fall into the semantic trap Korzybski mentioned of assuming the symbol called God to be an unchangeable supernatural person.. In the logic in which most philosophical religious arguments are presented, the assumption of a personal being identified as God is the first premise upon which all other premises rest. Attempts by philosophical scientists to propose accepting the possibility of a divine cosmic principle, or force, is denounced as an attempt to do away with God.

The assumption of God includes the assumption of a divine purpose. One of the recent contributions to the attempt semantically to reconcile science and religion is the term Intelligent Design. Presented at first as a potential bridge across the chasm by eliminating the word God, it soon fell under the logic that design demanded a designer, therefore, theologians were still speaking of the same God by a different name. It is almost impossible for the human mind to conceive of intelligence without thinking of someone who is intelligent. Design argues for a divine intent or ultimate purpose. The assumption of a divine purpose demands assuming an unchanging God by whom any unanswerable questions can be settled as a part of fulfilling God's divine purpose

Bishop John Shelby Spong argues the felt need for an unchanging God is the ubiquitous fear of change. Many metaphors of fear appear in hymns and religious poetry,

as, for example, “A Mighty Fortress is our God.”; “...a shelter in a time of storm.”; “Safe in the Arms of Jesus.”; “Rock of Ages...Let me hide myself in Thee.”; “Leaning on the Everlasting Arms”; and many other hymns depict God as a refuge from danger.

Of course, both fear and hope live together in the minds of most people in the idea of Heaven and Hell. An unchanging God is not going to make an exception or give time off for good behavior if one has not been properly “saved” through the ordinances of the “church.” Likewise, if one has been “saved” through profession of faith in Christ and baptism by the church, he/she can rest assured of a home in “Heaven.” Whether one believes Heaven and Hell are literal physical places or only states of being is irrelevant. Religious philosophy divides reality into two realms, the natural and the supernatural.

With the developments in quantum mechanics and chaos theory in physics and the deciphering of the genetic code in biology, the sense of awe and wonder is almost like a religious experience. As Dr. Timothy Johnson, medical reporter for ABC news, observed about the rapid recent scientific advances, “It tends for me, at least, to break down the so-called line between natural and supernatural.” Science is and has been opening up an infinite realm of possibilities which are constantly being constrained by the quantum principle of probability.

So far we have confined the discussion to what may be the greatest stumbling block for scientists, the personalized omnipotent omniscient God of the three major monotheistic religions of Judaism, Islam, and Christianity. The claims made for this God can not be accepted by scientists in terms of presently known physical laws. The semiotic problem of differences in the languages used among both scientists and religionists and the meanings that have become attached to their words reflects their thinking and can interfere with effective communication.

We turn our attention now to two of the other major world religions, Hinduism and Buddhism. The same semiotic problem of language impacts their way of thinking about their world in the same way it does with monotheistic religions.

As I mentioned earlier, in the Hindu tradition a variety of gods and goddesses are accepted as being able to perform superhuman feats when they incarnate among humans. In Balinese Hinduism, there are still vestiges of Animism in the villages with a variety of nature gods. For example, we were in the village of Ubud in Bali at the eclipse of the moon when pandemonium broke out in the village. People were shouting and beating on all sorts of noise makers. I asked about it and was told the evil god (I don’t recall his name) had captured the moon goddess and they had to frighten him to release her. The eclipse passed, and everyone was happy for having saved the moon goddess. Other vestiges of animism exist. I still have two images of the rice goddess made of woven rice straw. Weaving and placing these goddesses is believed to assure a good harvest.

Besaki, the “mother temple” of Balinese Hinduism, is high on Gunung Agung an active volcano. When large clouds of smoke began rising from the volcano it was said the god was angry. We were told that ritual ceremonies and sacrifices were to be held at Besaki temple to appease the god of the volcano, and, as curious American visitors, we attended. We could feel the ground shaking during the festivities as they danced and sang, then carried animals to the edge of the caldera and sacrificed them. After a while the mother priestess came from the temple in a trance and petitioned the god to accept their offerings. We returned home to Java, and the next day the volcano erupted with a cloud of ash that turned day into night even on Java. Strangely, the mud flow that wiped

out everything in its path split above the temple and spared it, but entire villages were wiped away. This fact sanctified the temple.

While in China all religions were banned after the Communist revolution, the three main traditional religions, Buddhism, Taoism, and Confucianism survived among the older generations. When we lived in China after the Cultural Revolution these were being restored. In none of these religions, however, is the concept of a personalized god a foundation for belief. Rather, all three promote recommendations for living a good life. In Buddhism the goal is to become spiritually enlightened by following an eightfold path to understanding, so that after many lifetimes if one has reached perfect enlightenment one will move on into a realm of non-physical existence. This idea is not too dissimilar to the Christian concept of leaving the troubles of this world and going to Heaven. .

Admittedly, The simplified generalization of Buddhism and Hinduism in this paper is inadequate and the time too brief to consider the various branches of these two major religions. However, underlying both western and oriental religious traditions there is a firm belief in a non-physical, or spiritual, world into which a person goes at death to remain in bliss forever, or from which he/she is born again and again into this physical world to be rewarded or punished by the physical form into which he/she is destined to be born. Known generally as reincarnation, one's karma, or balance of merit and demerit earned in previous lives, determines one's reincarnated state. In a society in which life is hard, and in which evil, injustice, and oppression is common, belief that one is born repeatedly into an incarnation cycle is not a pleasant thought, and leads one to desire to accumulate sufficient merit to escape the need for rebirth and be allowed to meld into the blessed eternal spirit world of non-beingness and be freed from the tribulations of physical existence.

One of the problems in the confrontation between science and religion is the idea that a non-physical realm is considered a reality by religionists and considered a figment of imagination by materialists. The mathematician/logician Kurt Godel commented on this disparity, "In the future, it [will be] deemed a great oddity that 20th century scientists had discovered elementary physical particles but had failed to even consider the possibility of elementary psychic factors." Is there a dimension of non-physical being?

The concept of the continuation of life after physical death appears to be universal in a variety of forms in many different religions. Recognition of the social and political injustices and inequities evident in society in which evil people prosper and good people suffer led philosophers to extend the concept of justice, or reward and punishment, into an after-life. If one did not receive his or her reward or punishment in their physical lifetime, they would receive it in an afterlife. This is expressed in theistic religions to the concept of "heaven" and "hell", or some non-worldly location, taught to justify justice with the hope for reward or the expectation of punishment. In Hindu/Buddhist thought, justice is identified by the term reincarnation. The concept became interpreted as metempsychosis, or the transfer of one's soul after death into another better or worse animal body or a better or worse social condition according to one's karma from the previous life. As in theistic religions, life, or the "soul", is assumed to be an immortal endless continuum, not a singular event limited to one physical body. The difference between these concepts is whether the "soul" goes somewhere after death to remain forever, or is reincarnated repeatedly back into the world

Reared as I was in evangelical Christian tradition of the deep south United States Bible Belt, I accepted the concept of reincarnation taught to be a pagan belief held by ignorant people in India and other oriental countries. We even sent missionaries to lead them out of their ignorance. It was not until I was in college that I realized reincarnation was held by many serious thinkers in the Judeo-Christian tradition. When the Anglican Bishop Leslie Weatherhead shocked the Christian world with his defense of doubt in *The Christian Agnostic*, I began to look at reincarnation seriously.

The interpretation of reincarnation as metempsychosis, or transmigration into other animal forms, did not seem reasonable to me. I am convinced that life evolves progressively, not regressively. This interpretation of metempsychosis has been so abused and ridiculed in western thought by comedians, the media, and folklore that it seemed virtually useless for any serious religious discussion. Yet, this philosophical concept of repeated lives can not be ignored in any presentation of a global perspective on science and religion. What is the nature of this phenomenon we call life?

We readily recognize the difference between collections of chemical molecules in bodies that are alive and bodies that are not. Chemical elements forming the cellular structures are the same, in both, but what constitutes the difference? We call it life, but no one has satisfactorily identified what life is or how it originated. Efforts to create artificial life have been fruitless, and efforts to explain the origin of life are speculative. All living things, from the simplest virus to the complex vertebrates, are never generated from inanimate chemicals but are derived from previously existing living things. When and how life forms evolved to the human level is deduced from incomplete fossil evidence. Straight Darwinian explanations of the diversity of life by evolving through a process of natural selection start with an assumption of life, but they never explain what life is and only speculate about how it began. Literal Bible theists refuse to accept the idea that modern cognitive human life could have been developed by evolution through natural selection. For them we are a special creation by God. Current archeological evidence suggests there may have been at least three proto-human species, but only one survived to continue evolving into modern humans. With our present short range viewpoint we can not conceive that this present human species might some day become extinct unless we change our way of thinking.

At present there is heated controversy over when in the course of reproduction a fertilized ovum becomes a human being. We recognize that our physical form is determined by the genetic structure, or DNA, but the question of when this physical form can be called a human being is controversial. Is it human at conception or only potentially human? Some claim the physical structure only becomes human when it is "quickened" by the entry of a "soul" at around six weeks following conception. Still others say it becomes a human being at birth only after becoming able to survive independent of the mother's womb.

This question, like all other unanswerable questions, reflects one's religious belief. The controversy creates a semiotic problem by differing definitions which arise from differing cultural and religious backgrounds. With the advent and growth of holistic treatment in medicine and psychology, there is increasing evidence that one's religious perspective has a distinct impact on one's physical and psychological well being. This affects one's thinking and behavior, which in turn influences the society of which one is a part. Perhaps we should ask, as George Ellis suggests, not how we came to be but why?

The maxim “East is East, and West is West, and never the twain shall meet” expresses an ancient semiotic problem between theistic religious thought and oriental religious thought which needs to be resolved. In spite of a multitude of anecdotal accounts of remembering a previous life or lives, a stigma is attached by the general western religious community to the word reincarnation. For that reason, I would like to introduce another term for the concept of multiple lives which has not acquired the same stigma.

The word *palingenesis* derived from Greek instead of Latin, simply means “to begin again.” By considering life as a universal cosmic force impacting the physical domain, life becomes the dynamic of evolution. Only living entities evolve. Inanimate physical forms do not, but are subject to the law of entropy, or decay. Changing the name allows us to re-define life. Like energy, life can be defined as an eternal indestructible force acting symbiotically with matter. This redefines palingenesis as a different concept from reincarnation. Instead of thinking of continuous life as reward and punishment in the name of justice, it permits us to consider life as the dynamic of evolution. Consider Palingenesis as a continuing process of development, evolving through time through a series of sapient cognitive bodies reaching for greater understanding of the principles governing the perpetually fluid cosmos. Palingenesis answers the perpetually frustrating “why” of existence and provides a reason for being. It eliminates the controversial divine plan concept as well as the intelligent design, or watchmaker, principle.

Life, then, is not a short term thing as most believe, but is rather a continuous process of growing which defines our existence in terms of perpetual life periodically occupying a physical body in order to function in a physical world, instead of defining our existence as being essentially a physical body having a soul which leaves it at death. At the human level, palingenesis provides an opportunity to see ourselves and others at any time as having arrived at a given evolutionary level of understanding. From this point we can creatively reach higher toward a still to be realized potential. It releases us from the constraint of thinking in the short span of one lifetime. It expands our horizon toward eternity. It defines our corporeal existence as a symbiotic relationship of spirit and body functioning by evolving through the multiple experiences of many lifetimes and situations. It allows us to learn from the good and bad choices made in the process.

While we can, and sometimes do, learn from the past, this linguistic change does not imply that all members of the human species have evolved to an equal level. Our physical form may not significantly change even over long stretches of time, but our spiritual evolution will continue. Those that learn slowly, or do not learn, may return and repeat the same mistakes many times. This condition has led some to the conclusion that human nature never changes and that history repeats itself. Some people individually still live and think at a very primitive level, while others are reaching for the stars. But as the individual evolves, so does the human race.

Palingenesis provides a concept of life more like T.S. Eliot’s spiral staircase than like an endless circle, a dead end road, or like a ceaseless pendulum as Gomer Pound suggests. On each landing we can consider where we are, look down at where we have been, and look up to where we can be. This is the process in which serious discussions of the sciences and religion engage. Some, perhaps most, do neither, but, as David Thoreau suggests, live out their lives in quiet desperation.

Steven Jay Gould's evolutionary concept of punctuated equilibrium suggests that when species reach a state of satisfaction they will remain in that state until there is a felt need to change. Changes in human collective thinking are usually instigated when some individual who has through time grown to a higher level of understanding than others, sees a need for change in the collective psyche, and returns to occupy another body for the purpose of leading the human race to a higher level of thinking. Such individuals do not miraculously appear among us but appear through the natural process of rebirth and physical growth. Every historical major shift in thinking in both science and religion has resulted from the influence of such persons. Throughout our evolutionary history there have been many such persons upon whose thinking others have built to influence the direction of collective human thought.

One such person emerging on the contemporary scene of science and the fundamental questions of religion is the mathematics professor George Ellis of the University of Capetown. He has been described as having one foot planted in the heavens and the other foot firmly rooted in the earth. Ellis considers that much of life is basically a struggle between rationality and emotion. While most of us consider ourselves to be rational, much if not most of our thinking and behavior derives from our emotions and beliefs. Ellis suggests neither scientists nor theologians are exempt.

Logic is a process of manipulating symbols, verbal or mathematical, in order to reach a desired conclusion. Scientific conclusions are reached by logical deductions from observed evidence and colored by the assumptions of the observer. When replication by others using the same logic and assumptions reaches the same conclusion, the conclusion is validated. When stated symbolically, conclusions are accepted as facts. Any conclusion is only as good as the assumption on which it is based. Theologians follow the same mental process as scientists. The essential difference is that they work from different assumptions.

Meetings such as this indicate there is a growing restlessness simmering in both science and religion as new and unexpected discoveries in many scientific and religious disciplines are shaking previously held assumptions. The foundation of much theological dogma is quaking in spite of efforts by fundamentalists to shore it up. With increased tolerance of new ideas growing on both sides of the divide, it will soon become generally accepted that there is more in common between science and religion than either has yet been willing to admit. Although new insights at the leading edges of both will continue to be controversial, changes in our way of thinking are taking place slowly but inevitably.

Having argued that the foundation of the persistent confrontation between religion and science is basically semantic, or the different ways we think within the language we use and the assumptions we derive from them, we must ask what should be done to establish a firmer semiotic foundation for these and other discussions?

Probably the first thing both need to do is to recognize that our human species functions in a world of linguistic symbolism which attempts to describe mysteries we are only beginning to try to understand. When borrowing and using the language of another discipline, one tends to take over the implications that go along with the terminology. One needs to be cautious that the meanings are not colored by a feedback loop of one's personal assumptions or previous beliefs. Next, while some contend many scientific developments have a religious significance in improving human life and society, one must distinguish between science as a quest and religion as a belief. In a search for truth,

neither science nor religion should be bound either to historically or contemporarily held assumptions. Finally, we need to take a holistic view of the cosmos. We should accept there are not two realms of reality, a physical realm and a spiritual realm, but that they are one unified symbiotic reality. Each is dependant on the other as two aspects of a whole, or as two sides of the same coin. Research should not explore them as separate independent entities but should study both in their symbiotic relationship with each other.

I recall the title of a paper I wrote over sixty years ago, "Binding Ourselves Apart." Too often in discussions of Science in relation to Religion we bind ourselves apart with the language we use. When both science and religion begin to churn with new developments and develop a tolerance of new ideas, further breakthroughs in human understanding lurk just over the horizon.

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